

In accordance with the present invention, a system, method and apparatus is provided for chemically reducing waste. The apparatus includes a substantially alkaline-resistant vessel having a temperature sensor positioned in thermal communication therewith, a heater in thermal communication with the vessel, a substantially alkaline-resistant magnetic stir rod adapted to be positioned within the vessel, and a magnetic stirrer adapted to produce a rotating magnetic field within the vessel capable of spinning a magnetic stir rod positioned therein. The apparatus further includes a water inlet valve operationally connected to the vessel and a water outlet valve operationally connected to the vessel. An electronic controller is connected in electric communication to the heater, to the magnetic stirrer, to the water inlet valve, to the water outlet valve, and to the temperature sensor and is adapted to maintain the temperature of the substantially alkaline resistant vessel substantially at a predetermined value.